of anhydrous toluene are evaporated off. The solution is cooled to room temperature and 120 mg (0.2% by weight) of dibutyltin dilaurate are added to the solution. A stoichiometric quantity of isophorone diisocyanate (128 mg) is dissolved in 5 ml of anhydrous toluene and added to the mixture. The reaction is monitored by visualizing using infrared spectroscopy (by enhancing the reduction in the isocyanate band at 2260 cm^{-1}). At the end of 90 minutes, 2.4 g of polypropylene glycol monobutyl ether (Mn 400) (PPG) (Aldrich, Milwaukee, USA) are dissolved in 20 ml of anhydrous toluene and added dropwise to the mixture (the low-molecular-weight polyoxypropylenes are commonly called "polypropylene glycol"). The reaction is continued overnight (about 15 hours) at 5°C (the isocyanate band decreases from the beginning of the reaction and then stabilizes). 80 ml of toluene are added to the mixture in order to reduce the viscosity of the solution and the polymer is precipitated using 550 ml of petroleum ether, filtered on No. 4 sintered glass, washed with excess petroleum ether and dried under vacuum.

EXAMPLE 7:

Determination of the thermothickening behaviour of a PVA-NIPAM copolymer and of a linear triblock copolymer POP-POE-POP.

The rheometer used in this example is identical to that used in Example 3 above. The PVA-NIPAM used corresponds to that in Table 3 and the linear triblock copolymer POP-POE-POP is that prepared in Example 6.

In Figure 9 are represented the rheological behaviours of media having

- respectively 4.5% by weight of PVA-NIPAM or 4.75% by weight of PVA dissolved in a 50 mM TRIS-TAPS electrolyte (Figure 9a). It is observed that the

PVA-NIPAM copolymer exhibits a thermothickening character from a temperature greater than 35°C, which PVA alone does not exhibit,

and

- the thermocrosslinking character of the linear triblock copolymer POP-POE-POP which thickens rapidly from a temperature of 20°C (Figure 9b). Also shown on this graph is the rheological behaviour of the polyethylene glycol polymer at the same concentration. In this case, no increase in viscosity as a function of the temperature is observed.

<u>EXAMPLE 8:</u>

Separation properties of an electrophoretic separation medium comprising a PVA-NIPAM copolymer according to Example 5.

The fluorescence detection is performed under the same conditions as those described in Example 4. As regards the capillary channel, it has a total length of 40 cm and an effective length of 30 cm, an internal diameter of 100 μm and it is coated with an acrylamide derivative according to the process described by HJERTEN J. Chromatogr., 1985, 347, 191 in order to eliminate electroosmosis.

The electrolyte comprises 4.75 g/100 ml of PVA-PNIPAM copolymer and 50 nM of TRIS-TAPS buffer.

The electric field is 200 volts per centimetre. The injection is carried out over 10 seconds at 200 volts per centimetre. The sample is the sizer 50-500, Pharmacia Biotech, diluted 1/500 in MILI Q water (Miliport).

The separating properties are assessed at two temperatures, 20°C (Figure 10a) and 44°C (Figure 10b). The separating time is improved, but the resolution is not markedly increased, which is undoubtedly due to the

excessively low viscosity reached at 44°C for this medium.

EXAMPLE 9:

Separating properties of a separation medium comprising, as copolymer, a triblock copolymer POP-POE-POP according to Example 8.

The medium was tested under the conditions recommended for the medium described in Example 7 above.

The results obtained are represented in Figure 11.

Figure 11a presents the separating properties of the control medium, that is to say simply based on unmodified polyethylene glycol, at 20°C. Figure 11b presents the separating properties of a medium comprising the copolymer POP-POE-POP at a temperature of 20°C by analogy with the control medium and Figure 11c illustrates the separating properties of a medium based on the said copolymer but at a temperature of 50°C. This shows that the coopolymer exhibits, from room temperature, a resolution greater than that obtained with POE alone, undoubtedly because of its higher molecular mass, but that the properties are again greatly improved when 50°C is reached, and shows that the polymers of the block type having at least two blocks with LCST, may also be advantageously used in the context of the invention to carry out electrokinetic separations.

EXAMPLE 10:

Preparation of a charged copolymer PAAgNIPAM (Polyacrylic Acid/Poly-N-Isopropylacrylamide).

The polyacrylic acid used is in solution at 12.5 g/100 ml in water. The polymer designated PAA500 has a weight-average molar mass of 500 000 g/mol (Fluka).